Amendments to the Specification

IN THE WRITTEN DESCRIPTION

Please replace paragraph [0004] with the following amended paragraph:

[0004] An oxide superconductor has electrical anisotropy, wherein the crystals themselves readily conduct electric current in the a and b axial directions of the crystal axis, but not so well in the c axial direction. Therefore, when an oxide superconductor is formed on a substrate, the a axis or b axis must be oriented in the direction in which electric current flows, and the c axis oriented ~~in~~ vertically to the flat surface.

Please replace paragraphs [0053] and [0054] with the following amended paragraphs:

[0053] Copper, nickel, titanium, molybdenum, niobium, tantalum, tungsten, manganese, iron, silver, and other such metals and alloys thereof that offer excellent strength and heat resistance can be used as the metal substrate used in the oxide superconducting wire of the present invention. Stainless steel, Hastelloy, and other nickel alloys are particularly favorable because of their superior resistance to corrosion and heat.

<Intermediate layer>

~~[Material]~~Material

[0054] The intermediate layer is formed by the IBAD method. Examples of the material used to form this intermediate layer include YSZ, MgO, $SrTiO_3$, and $Gd_2Zr_2O_7$, and it is also possible to use any suitable compound having a pyrochlore structure, rare earth-C structure, perovskite structure, or fluorite structure. Of these, the use of YSZ or $Gd_2Zr_2O_7$ is preferable. $Gd_2Zr_2O_7$ is a particularly suitable intermediate layer material because not only is its IBAD film formation rate higher than that of YSZ, but its $\Delta\Phi$ (FWHM: full width at half maximum), which is an index of orientation, is also smaller. Fig. 4

shows the relationship of $\Delta\Phi$ to film thickness when films were made from $Gd_2Zr_2O_7$ and from YSZ. This graph indicates that $Gd_2Zr_2O_7$ has a higher orientation rate and a smaller $\Delta\Phi$ than YSZ.

~~[Film Thickness]~~Film Thickness

Please replace paragraph [0057] with the following amended paragraph:

[0057] For the above reasons, the thickness of the intermediate layer in the present invention should be no more than 1000 nm. 1000 nm may be exceeded, but since it takes a long time to form a film by the IBAD method as mentioned above, a film thickness over 1000 nm is undesirable in terms of productivity. Furthermore, exceeding 2000 nm is undesirable because the surface roughness will be larger and there will be a decrease in critical current density.

Please replace paragraph [0060] with the following amended paragraph:

[0060] The CeO_2 layer should be at least 50 nm in thickness, but for adequate orientation to be obtained, at least 100 nm is preferable, and at least 500 nm is even better. However, if the thickness exceeds 500 nm, crystal orientation will suffer. Therefore, a thickness of ~~5000~~500 nm or less is preferred.

<Oxide Superconducting Film>